

Power Amplifier

18-25GHz/33dB Gain/35dBm Psat

Model: TLPA18G25G-30-35

TLPA18G25G-30-35 is a power amplifier with a minimum small signal gain of 30 dB and a nominal Psat of 35 dBm across the frequency range of 18 to 25 GHz. The DC power requirement for the amplifier is +18 VDC/1.7 A. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Frequency range: 18-25GHz
- Gain: 30dB Min
- Output Power Psat: 35dBm Typ
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

Applications:

- Cellular
- PCN
- GSM
- ISM
- Lab Test

电气特性 Electrical Characteristics:

| 参数 Parameter | Min | Typ | Max | 单位 Units |
|--------------------------|-------|------|-----|----------|
| 频率范围 Frequency range | 18-25 | | | GHz |
| 小信号增益 Small Signal Gain | 30 | | | dB |
| 增益平坦度 Gain Flatness | | ±2.5 | | dB |
| 线性输出功率 Output P1dB | | 34 | | dBm |
| 饱和输出功率 Output Psat | | 35 | | dBm |
| 杂散 Spurious@Pout=33dBm | | | -50 | dBc |
| 谐波抑制 Harmonic@Pout=33dBm | | -15 | | dBc |
| 输入驻波 Input VSWR | | 2.0 | | :1 |
| 直流电压 DC Voltage | | 18 | | V DC |
| 直流电流 DC Supply Current | | 1.7 | | A |
| 阻抗 Impedance | 50 | | | Ohms |

机械特性 Mechanical Specifications:

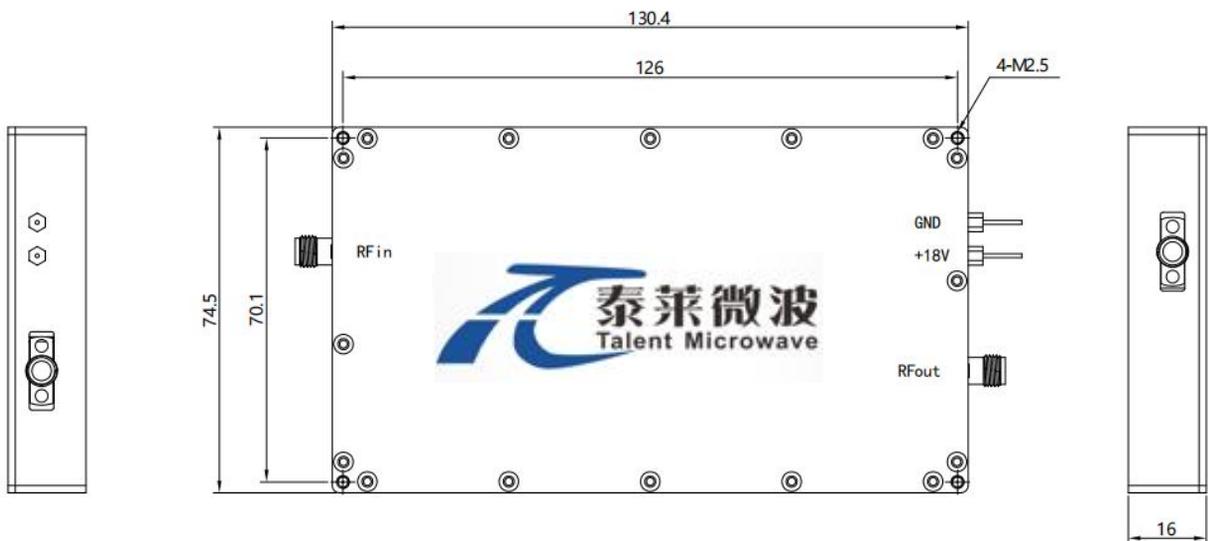
| 参数 Parameter | 指标 Value | 单位 Units |
|---------------------------------|---------------|----------|
| 输入/输出接口 Input /Output Connector | SMA Female | |
| 直流偏置 DC Bias | Solder Pin | |
| 尺寸 Size | 130.4*74.5*16 | mm |
| 重量 Weight | ≤500 | g |

绝对最大值 Absolute Maximum Ratings:

| 参数 Parameter | 指标 Value |
|------------------------------|----------------------|
| 供电偏置电压 Supply Bias Voltage | +18 V |
| 输入功率 RF Input Power | +10 dBm |
| ESD灵敏度 ESD sensitivity (HBm) | Class 0, passed 150V |

外形图 Outline Drawing:

Unit:mm



*****Heat Sink Required During Operation**



ESD Protection: Strictly adhere to ESD precautions to prevent electrostatic damage.

温度环境 Environmental Conditions:

| 参数 Parameter | Min | Typ | Max | 单位 Units |
|------------------------------------|---|-----|-----|----------|
| 操作温度 Operating Temperature* | -40 | | +60 | °C |
| 存储温度 Non-operating Temperature* | -50 | | +70 | °C |
| 相对湿度 Relative humidity | | 95 | | % |
| 海拔 Altitude | 10,000 | | | feet |
| 震动 Shock / Vibration(MIL-STD-810F) | 25g rms (15 degree 2KHz) endurance, 1 hour per axis | | | |
| 冲击 Shock(non operating) | 20G for 11msc half sin wave,3 axis both directions | | | |

*Note: For a wider temperature range, please consult the manufacturer.

订货信息 Ordering Information:

| 标准型号 Base Number | 描述 Description | 版本号 Revision |
|---------------------|--|--------------|
| TLPA18G25G-30-35 | Power amplifier 18-25GHz, Gain:30dB,Psat:35dBm,+18V DC,Without Heatsink | Rev.1.1 |
| TLPA18G25G-30-35-HS | Power amplifier 18-25GHz, Gain:30dB,Psat:35dBm,+18V DC,With Heatsink | Rev.1.1 |

典型曲线 Typical Performance Data:

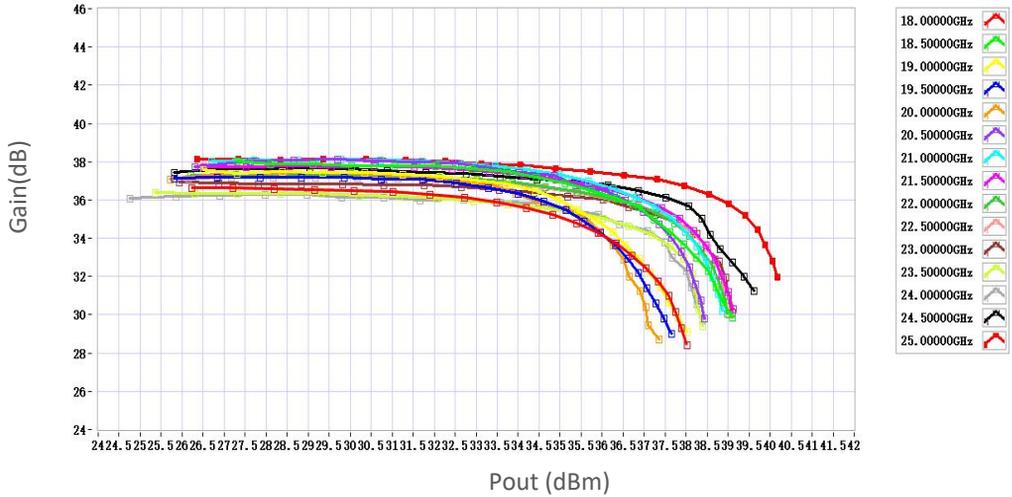
VSWR&Gain vs Frequency



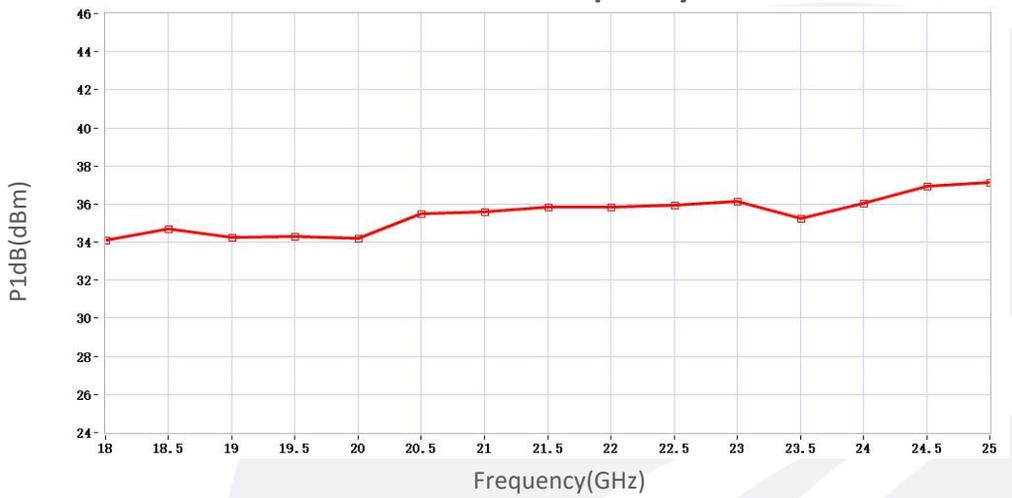
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

典型曲线 Typical Performance Data:

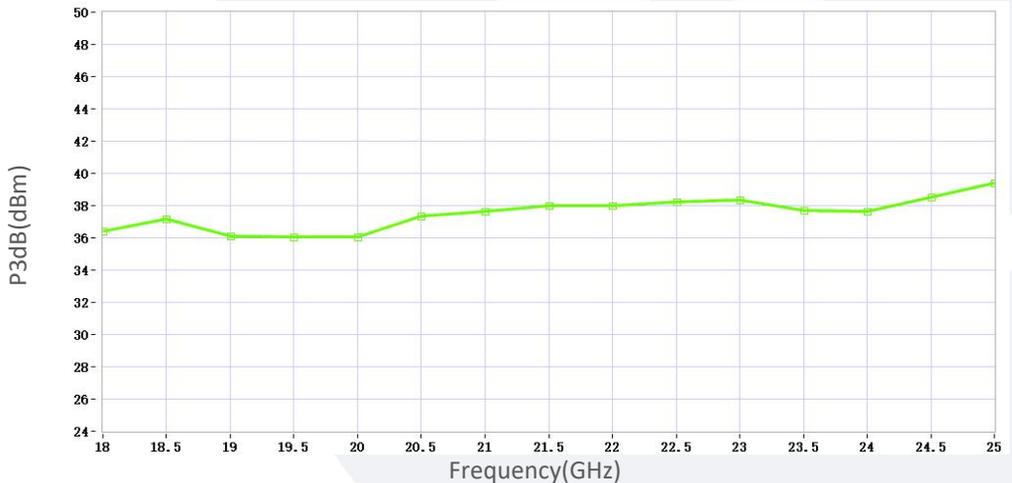
Gain vs Output Power



P1dB vs Frequency



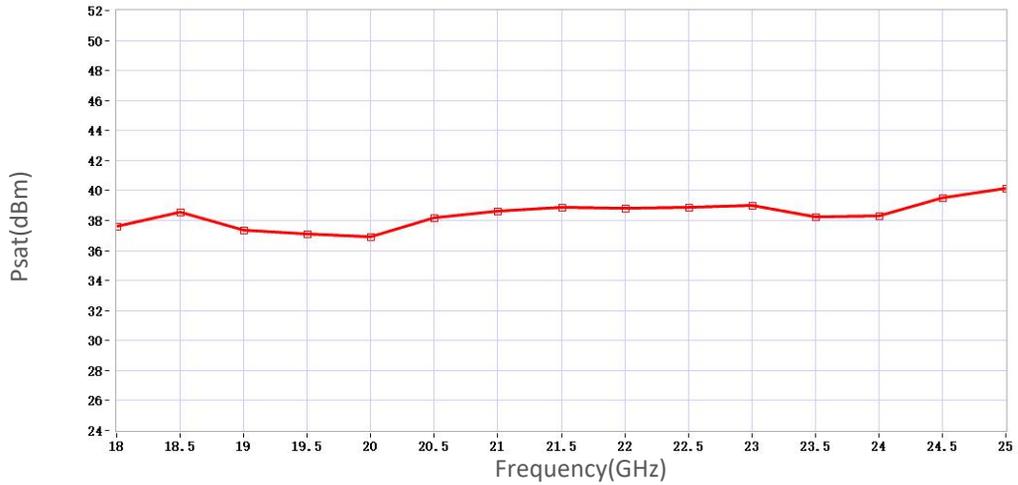
P3dB vs Frequency



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典型曲线 Typical Performance Data:

Psat vs Frequency



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